

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of reducing an amount of a constituent in tobacco, said method comprising the steps of:

(a) providing a vessel containing said tobacco comprising said constituent;
(b) contacting said tobacco with a subcritical fluid consisting of carbon dioxide or a hydrocarbon under conditions so that said amount of said constituent dissolves in said subcritical fluid; and

(c) removing said subcritical fluid from said vessel,
wherein said tobacco in step (a) has a moisture content of at least 10%;
wherein step (b) occurs at 0-24°C and 1000-2200 psi for carbon dioxide; said hydrocarbon is selected from ethane, propane at 0-50°C and 100-2000 psi, or butane; or said hydrocarbon is a compressed gas; or
wherein said tobacco having a reduced amount of said constituent has substantially the same taste and aroma of untreated tobacco or said flavor and aroma compounds removed in step (b) are redeposited in said tobacco after step (c);
thereby reducing the amount of said constituent in said tobacco.

2. (Previously Presented) A method of selectively reducing an amount of a secondary alkaloid relative to a primary alkaloid in tobacco, said method comprising the steps of:

(a) providing a vessel containing said tobacco comprising said secondary alkaloid and said primary alkaloid;
(b) contacting said tobacco with a subcritical fluid under conditions so that a greater amount of said secondary alkaloid relative to said primary alkaloid dissolves in said subcritical fluid; and
(c) removing said subcritical fluid from said vessel,

thereby selectively reducing the amount of said secondary alkaloid relative to said primary alkaloid in said tobacco.

3. (Currently Amended) A method of reducing an amount of a polycyclic aromatic hydrocarbon (PAH) in tobacco, said method comprising the steps of:

- (a) providing a vessel containing said tobacco comprising said PAH;
- (b) contacting said tobacco with a subcritical fluid under conditions so that said amount of said PAH dissolves in said subcritical fluid; and
- (c) removing said subcritical fluid from said vessel,
wherein said tobacco in step (a) has a moisture content of at least 10%;
wherein said subcritical fluid is selected from carbon dioxide, ethane, propane, butane, Freon 22, or nitrous oxide, and wherein when said subcritical fluid is carbon dioxide, step (b) occurs at 0-24°C and 1000-2200 psi, and, when said subcritical fluid is propane, step (b) occurs at 0-50°C and 100-2000 psi, or wherein said subcritical fluid is a hydrocarbon that is a compressed gas; or
wherein said tobacco having a reduced amount of said PAH has substantially the same taste and aroma of untreated tobacco or said flavor and aroma compounds removed in step (b) are redeposited in said tobacco after step (c);
thereby reducing the amount of said PAH in said tobacco.

4. (Previously Presented) A method of selectively reducing an amount of a PAH relative to a primary alkaloid in tobacco, said method comprising the steps of:

- (a) providing a vessel containing said tobacco comprising said PAH and said primary alkaloid;
- (b) contacting said tobacco with a subcritical fluid under conditions so that a greater amount of said PAH relative to said primary alkaloid dissolves in said subcritical fluid; and
- (c) removing said subcritical fluid from the vessel,

thereby selectively reducing the amount of said PAH relative to said primary alkaloid in said tobacco.

5. (Currently Amended) A method of reducing an amount of a constituent in tobacco, said method comprising the steps of:

(a) providing a system comprising a plurality of connected vessels containing said tobacco comprising said constituent;

(b) contacting tobacco in a first vessel with a subcritical fluid under conditions so that said amount of said constituent dissolves in said subcritical fluid;

(c) removing said subcritical fluid from said first vessel; and

(d) directing said subcritical fluid to a second vessel,

wherein said tobacco in step (b) has a moisture content of at least 10%;

wherein step (b) occurs at 0-24°C and 1000-2200 psi for carbon dioxide; said hydrocarbon is selected from ethane, propane at 0-50°C and 100-2000 psi, or butane; or said hydrocarbon is a compressed gas; or

wherein said tobacco having a reduced amount of said constituent has substantially the same taste and aroma of untreated tobacco or said flavor and aroma compounds removed in step (b) are redeposited in said tobacco after step (c);
thereby reducing the amount of said constituent in said tobacco in said first vessel.

6. (Original) The method of claim 5, further comprising the steps, before, during, or after step (c) of:

(i) isolating said first vessel from said system; and

(ii) removing said tobacco from said first vessel.

7. (Original) The method of claim 5, wherein in step (d), said subcritical fluid is that of step (c).

8. (Original) The method of any of claims 1-5, wherein in step (b), said subcritical fluid is a liquid.

9. (Original) The method of claim 8, wherein said liquid is a compressed gas.

10. (Original) The method of any of claims 1-5, wherein in step (b), said subcritical fluid is a compressible gas.

11. (Currently Amended) The method of claim 1-~~or~~5, further comprising, after step (c), the step of separating said constituent from said subcritical fluid.

12. (Original) The method of claim 2, further comprising, after step (c), the step of separating said secondary alkaloid from said subcritical fluid.

13. (Original) The method of claim 3 or 4, further comprising, after step (c), the step of separating said PAH from said subcritical fluid.

14. (Original) The method of claim 11, wherein said separating comprises flowing said fluid containing said constituent from step (c) into a separator vessel containing a substance capable of separating said constituent from said subcritical fluid.

15. (Original) The method of claim 14, wherein said substance comprises citric acid or magnesium silicate.

16. (Original) The method of claim 12, wherein said separating comprises flowing said fluid containing said secondary alkaloid from step (c) into a separator vessel containing a substance capable of separating said secondary alkaloid from said subcritical fluid.

17. (Original) The method of claim 16, wherein said substance comprises citric acid or magnesium silicate.

18. (Original) The method of claim 13, wherein said separating comprises flowing said fluid containing said PAH from step (c) into a separator vessel containing a substance capable of separating said PAH from said subcritical fluid.

19. (Original) The method of claim 11, wherein said separating comprises flowing said subcritical fluid containing said constituent from step (c) into a separator vessel, wherein said subcritical fluid undergoes a change in pressure or temperature and said constituent precipitates.

20. (Original) The method of claim 12, wherein said separating comprises flowing said subcritical fluid containing said secondary alkaloid from step (c) into a separator vessel, wherein said subcritical fluid undergoes a change in pressure or temperature and said secondary alkaloid precipitates.

21. (Original) The method of claim 13, wherein said separating comprises flowing said subcritical fluid containing said PAH from step (c) into a separator vessel, wherein said subcritical fluid undergoes a change in pressure or temperature and said PAH precipitates.

22. (Original) The method of claim 11, further comprising, after said separating, the step of recirculating said subcritical fluid to said vessel.

23. (Currently Amended) The method of ~~claims~~ claim 12, further comprising, after said separating, the step of recirculating said subcritical fluid to said vessel.

24. (Currently Amended) The method of ~~claims claim~~ 13, further comprising, after said separating, the step of recirculating said subcritical fluid to said vessel.
25. (Original) The method of claim 22, wherein during said recirculating, flavor or aroma compounds removed in step (b) are deposited in said tobacco.
26. (Original) The method of claim 23, wherein during said recirculating, flavor or aroma compounds removed in step (b) are deposited in said tobacco.
27. (Original) The method of claim 24, wherein during said recirculating, flavor or aroma compounds removed in step (b) are deposited in said tobacco.
28. (Original) The method of any of claims 2-5, wherein said subcritical fluid is selected from the group consisting of carbon dioxide, Freon 22, propane, ethane, nitrous oxide, and a combination thereof.
29. (Currently Amended) The method of any of claims 1-5, wherein the moisture content of said tobacco in step (a) is at least 10%.
30. (Currently Amended) The method of ~~any of claim 1, 3, 4, of 5~~ claims 1-5, wherein the pH of said tobacco in step (a) is between 4 and 9.
31. (Original) The method of claim 1 or 5, wherein said constituent is a PAH.
32. (Original) The method of claim 1 or 5, wherein said constituent is a secondary alkaloid.
33. (Original) Tobacco processed by the method of claim 1.

34. (Original) Tobacco processed by the method of claim 2.
35. (Original) Tobacco processed by the method of claim 3.
36. (Original) Tobacco processed by the method of claim 4.
37. (Original) Tobacco processed by the method of claim 5.
38. (New) The method of claim 5, further comprising after step (c), the step of separating said constituent from said subcritical fluid.
39. (New) The method of claim 38, wherein said second vessel in step (d) contains a substance capable of separating said constituent from said subcritical fluid.
40. (New) The method of claim 39, wherein said substance comprises citric acid or magnesium silicate.
41. (New) The method of claim 38, wherein said subcritical fluid in the second vessel undergoes a change in pressure or temperature and said constituent precipitates.
42. (New) The method of claim 38, further comprising, after said separating, the step of recirculating said subcritical fluid to the first vessel.
43. (New) The method of claim 42, wherein during said recirculating, flavor or aroma compounds removed in step (b) are redeposited in said tobacco after step (c).